WHAT IS CLAIMED IS:

1. A system for performing surgical procedures and assessments, comprising:

a surgical accessory having at least one stimulation electrode; and

a processing system having at least one of computer programming software, firmware and hardware capable of stimulating said at least one stimulation electrode on a surgical accessory, measuring the response of nerves depolarized by said stimulation, determining a relationship between the surgical accessory and the nerve based upon the response measured, and communicating said relationship to a user, wherein said relationship may be used to determine at least one of nerve proximity, nerve direction, pedicle integrity, and neural pathology.

2. The system set forth in claim 1 and further, wherein the response of said depolarized nerves is measured by monitoring the EMG waveforms of myotomes associated with said depolarized nerves.

3. The system set forth in claim 2 and further, wherein said surgical accessory comprises a system for establishing an operative corridor to a surgical target site.

4. The system set forth in claim 3 and further, wherein said system for establishing an operative corridor to a surgical target site includes a series of sequential dilator cannulae, each having at least one stimulation electrode near a distal end.

5. The system set forth in claim 3 and further, wherein said surgical target site is a spinal target site.

6. The system set forth in claim 5 and further, wherein said operative corridor may be established via a lateral, trans-psoas approach.

7. The system set forth in claim 1 and further, wherein said surgical accessory comprises a pedicle testing device including a handle and a pedicle probe.

8. The system set forth in claim 7 and further, wherein said pedicle testing device is capable of testing at least one of the interior of a hole formed in a pedicle and a pedicle screw after insertion into said hole.

9. The system set forth in claim 8 and further, wherein said handle includes at least one button for initiating the transmission of said stimulation signal from said processing system to said pedicle probe.

10. The system set forth in claim 1 and further, wherein said surgical accessory comprises a nerve root retractor capable of retracting a nerve and monitoring nerve function at least one of before, during, and after surgery.

11. The system set forth in claim 11 and further, wherein said nerve root retractor monitors nerve function through at least one of monopolar and bipolar stimulation of said retracted nerve.

12. The system set forth in claim 10 and further, wherein said nerve root retractor includes a handle and a detachable nerve root retractor blade.